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Agent Docket No.: AP036-04

AMENDMENTS TO THE CLAIMS:

- (1) Please amend claims 1, and 4-8.
- (2) Please withdraw claims 9-47 without prejudice or disclaimer of the subject matter thereof.
- (3) Please add claims 48-83.
Claim 1 (Currently amended): A composition for protecting brain cells or improving memory; said composition comprising; and
an extract of Liriopsis tuber for protecting brain cells or improving memory;
a pharmaceutically acceptable carrier selected from the group consisting of
lactose, dextrose, sucrose, sorbitol, mannitol, xylitol, erythritol, maltitol, starch,
isomerized sugar, sugar, acacia gum, alginate, gelatin, calcium phosphate,
calcium silicate, cellulose, methyl cellulose, microcrystalline cellulose,
polyvinylpyrrolidone, purified water, distilled water, methylhydroxybenzoate,
propylhydroxybenzoate, paraoxybenzoate, methylparaoxybenzoate,
paraoxypropylbenzoate, talc, magnesium stearate, and mineral oil.

Claim 2 (Original): The composition of claim 1, wherein the content of the extract of Liriopsis tuber is 0.5-50% by weight based on the total weight of the composition.

Claim 3 (Original): The composition of claim 1, wherein the extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of Cl-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate.

Claim 4 (Original): The composition of claim [[1]] 3, wherein the extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of Cl-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform.

Claim 5 (Original): The composition of claim [[1]] 3, wherein the extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as

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described in claim 3 in a mixed solvent of Cl-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol soluble fraction.

Claim 6 (Original): The composition of claim [[1]] 3, wherein the extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in claim 3 in a mixed solvent of Cl-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol insoluble fraction.

Claim 7 (Currently amended): The composition of claim 1, wherein said composition further comprises at least one component selected from the group consisting of pharmaceutically acceptable carriers and additives an additive selected from the group consisting of natural carbohydrates, flavors, nutrients, vitamins, mineral (electrolytes), synthetic seasonings natural seasonings, coloring agents, fillers, pectic acid and its salt, alginic acid and its salt, organic acids, protective colloidal thickeners, pH regulating agents, stabilizers, preservatives, antioxidants, glycerin, alcohols, carbonizing agents, and sarcocarp.

Claim 8 (Currently amended): The composition of claim 1, wherein the composition is formulated into an administration form selected from the group consisting of an oral administration, topical applications, suppositories or, and sterile injections.

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Claim 9 (Withdrawn): Foodstuff comprising the composition according to claim 1 and a sitologically acceptable additive.

Claim 10 (Withdrawn): The foodstuff of claim 9, wherein the content of the extract of Liriopsis tuber is 0.1 to 15% by weight based on the total weight of foodstuff.

Claim 11 (Withdrawn): The foodstuff of claim 9, wherein said sitologically acceptable additive is at least one component selected from the group consisting of natural carbohydrates, flavors, nutrients, vitamins, minerals, seasonings, coloring agents, fillers, pectic acid and its salt, alginic acid and its salt, organic acids, protective colloidal thickeners, pH regulating agents, stabilizers, preservatives, antioxidants, glycerin, alcohols, carbonizing agents and sarcocarp.

Claim 12 (Withdrawn): A beverage comprising the composition according to claim 1 and a sitologically acceptable additive.

Claim 13 (Withdrawn): The beverage of claim 12, wherein the content of the extract of Liriopsis tuber is 1-30g per 100 ml of the beverage.

Claim 14 (Withdrawn): The beverage of claim 12, wherein said sitologically acceptable additive is at least one component selected from the group consisting of natural carbohydrates, flavors, nutrients, vitamins, minerals, seasonings, coloring agents, fillers, pectic acid and its salt, alginic acid and its salt, organic acids, protective colloidal thickeners, pH regulating agents, stabilizers, preservatives, antioxidants, glycerin, alcohols, carbonizing agents and sarcocarp.

Claim 15 (Withdrawn): A method for protecting brain cells against damage caused by excitatory amino acids and oxidative stress in a mammal comprising administering to said mammal a therapeutic amount of an extract of Liriopsis tuber.

Claim 16 (Withdrawn): The method of claim 15, wherein said extract of Liriopsis tuber is administered in an amount of from 0.1 mg/kg to 500 mg/kg.

Claim 17 (Withdrawn): The method of claim 16, wherein said extract is administered on a daily basis.

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Claim 18 (Withdrawn): The method of claim 15, wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation and rectal administration.

Claim 19 (Withdrawn): The method of claim 15, wherein said extract is concurrently administered with a pharmaceutically acceptable carrier, excipient or diluent.

Claim 20 (Withdrawn): The method of claim 15, wherein said administration comprises combining said extract with a beverage, and then orally administering said beverage.

Claim 21 (Withdrawn): The method of claim 15, wherein said administration comprises combining said extract with a foodstuff, and then orally administering said foodstuff.

Claim 22 (Withdrawn): A method for inhibiting AMPA-induced depolarization of a neuronal cell of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber.

Claim 23 (Withdrawn): The method of claim 22, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1 mg/kg to 500 mg/kg.

Claim 24 (Withdrawn): The method of claim 23, wherein said extract is administered on a daily basis.

Claim 25 (Withdrawn): The method of claim 22, wherein said extract is administered via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation and rectal administration.

Claim 26 (Withdrawn): The method of claim 22, wherein said extract is concurrently administered with a pharmaceutically acceptable carrier, excipient or diluent.

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Claim 27 (Withdrawn): The method of claim 22, wherein said administration comprises combining said extract with a beverage, and then orally administering said beverage.

Claim 28 (Withdrawn): The method of claim 22, wherein said administration comprises combining said extract with a foodstuff, and then orally administering said foodstuff.

Claim 29 (Withdrawn): A method of facilitating tyrosine phosphorylation of a hippocampal protein of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber.

Claim 30 (Withdrawn): The method of claim 29, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1 mg/kg to 500 mg/kg.

Claim 31 (Withdrawn): The method of claim 30, wherein said extract is administered on a daily basis.

Claim 32 (Withdrawn): The method of claim 29, wherein said extract is administered via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation and rectal administration.

Claim 33 (Withdrawn): The method of claim 29, wherein said extract is concurrently administered with a pharmaceutically acceptable carrier, excipient or diluent.

Claim 34 (Withdrawn): The method of claim 29, wherein said administration comprises combining said extract with a beverage, and then orally administering said beverage.

Claim 35 (Withdrawn): The method of claim 29, wherein said administration comprises combining said extract with a foodstuff, and then orally administering said foodstuff.

Claim 36 (Withdrawn): The method of claim 29, wherein said hippocampal protein comprises an insulin receptor.

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Claim 37 (Withdrawn): A method of inhibiting cholinesterase activity in the brain of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber.

Claim 38 (Withdrawn): The method of claim 37, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1 mg/kg to 500 mg/kg.

Claim 39 (Withdrawn): The method of claim 38, wherein said extract is administered on a daily basis.

Claim 40 (Withdrawn): The method of claim 37, wherein said extract is administered via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation and rectal administration.

Claim 41 (Withdrawn): The method of claim 37, wherein said extract is concurrently administered with a pharmaceutically acceptable carrier, excipient or diluent.

Claim 42 (Withdrawn): The method of claim 37, wherein said administration comprises combining said extract with a beverage, and then orally administering said beverage.

Claim 43 (Withdrawn): The method of claim 37, wherein said administration comprises combining said extract with a foodstuff, and then orally administering said foodstuff.

Claim 44 (Withdrawn): Use of an extract of *Liriopsis* tuber for the preparation of a medicament for preventing or treating neurodegenerative diseases.

Claim 45 (Withdrawn): Use of an extract of *Liriopsis* tuber for the preparation of a medicament for preventing or treating dementia.

Claim 46 (Withdrawn): Use of an extract of *Liriopsis* tuber for the preparation of a medicament for improving memory.

Claim 47 (Withdrawn): The method as of claim 29, wherein said hippocampal protein comprises ERKs (extracellular-signal regulated kinases).

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Claim 48 (New): The composition of claim 7 further comprising a beverage, and wherein the content of the extract of Liriopsis tuber is 1-30g per 100ml of said beverage.

Claim 49 (New): The composition of claim 7 further comprising a food product, and wherein the content of the extract of Liriopsis tuber is 0.1 to 15% by weight based on the total weight of said food product.

Claim 50 (New): The composition of claim 1, wherein said carrier is lactose, talc, and magnesium stearate.

Claim 51 (New): The composition of claim 3, wherein said carrier is about 500.0mg of lactose, about 5.0mg of talc, and about 1.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 500.0mg.

Claim 52 (New): The composition of claim 4, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 53 (New): The composition of claim 5, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 54 (New): The composition of claim 6, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 55 (New): The composition of claim 1, wherein said carrier is starch, and magnesium stearate.

Claim 56 (New): The composition of claim 3, wherein said carrier is about 10.0mg of starch, and about 100.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 500.0mg.

Claim 57 (New): The composition of claim 4, wherein said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

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Claim 58 (New): The composition of claim 5, wherein said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 59 (New): The composition of claim 6, wherein said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 60 (New): The composition of claim 1, wherein said carrier is sugar, paraoxybenzoate, paraoxypropylbenzoate, and purified water.

Claim 61 (New): The composition of claim 3, wherein said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 5.0g.

Claim 62 (New): The composition of claim 4, wherein said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 63 (New): The composition of claim 5, wherein said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 64 (New): The composition of claim 6, wherein said carrier is about 95.1g of sugar, about 80.0mg of paraoxybenzoate, about 16.0mg of paraoxypropylbenzoate, and to about 150ml of purified water, and wherein said Liriopsis tuber extract is about 50.0mg.

Claim 65 (New): The composition of claim 1, wherein said carrier is isomerized sugar, methylparaoxybenzoate, and purified water, and further comprising an antioxidant.

Claim 66 (New): The composition of claim 3, wherein said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about

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100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 67 (New): The composition of claim 4, wherein said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 68 (New): The composition of claim 5, wherein said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 69 (New): The composition of claim 6, wherein said carrier is about 20.0g of isomerized sugar, about 2.0mg of methylparaoxybenzoate, and to about 100.0ml of purified water, wherein said Liriopsis tuber extract is about 500.0mg, and further comprising about 5.0mg of an antioxidant.

Claim 70 (New): The composition of claim 1, wherein said carrier is distilled water, and further comprising an antioxidant and Tween 80.

Claim 71 (New): The composition of claim 3, wherein said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 72 (New): The composition of claim 4, wherein said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 73 (New): The composition of claim 5, wherein said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

Claim 74 (New): The composition of claim 6, wherein said carrier is about 2.0ml of distilled water, wherein said Liriopsis tuber extract is about 50.0mg, and further comprising about 1.0mg of an antioxidant and about 1.0mg of Tween 80.

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Claim 75 (New): A method for protecting brain cells against damage caused by excitatory amino acids and oxidative stress in a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber of claim 3, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1mg/kg to 500mg/kg, and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 76 (New): A method for inhibiting AMPA-induced depolarization of a neuronal cell of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber of claim 3, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 77 (New): A method of facilitating tyrosine phosphorylation of a hippocampal protein of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber of claim 3, wherein said extract of *Liriopsis* tuber is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 78 (New): The method of claim 77, wherein said hippocampal protein comprises an insulin receptor.

Claim 79 (new): The method as of claim 77, wherein said hippocampal protein comprises ERKs (extracellular-signal regulated kinases).

Claim 80 (New): A method of inhibiting cholinesterase activity in the brain of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis* tuber of claim 3, wherein said extract of *Liriopsis* tuber is

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administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

Claim 81 (New): A method of treating neurodegenerative diseases of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of claim 3.

Claim 82 (New): A method of preventing or treating dementia of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of claim 3.

Claim 83 (New): A method of improving memory of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of claim 3.